

ATTACHMENT - CLAIMS LISTING

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (currently amended) A hydrodynamic treatment device for separating material from a liquid flow, the device comprising a vessel having:

a cylindrical outer wall;

an inner partition which divides the interior of the vessel into an outer separation region and an annular inner separation regions, which communicate the outer and inner separation regions communicating with each other across the inner partition;

an inlet which is directed into one of the inner and outer regions to promote a rotating flow in the vessel;

a liquid outlet which extends from the other of the inner and outer regions; and

a frustoconical base which converges downwardly to an outlet opening for separated material, which said outlet opening of the frustoconical base communicates with the outer separation region beneath the inner partition;

a lower end wall wherein closing a lower annular end of the annular inner separation region is annular and is closed at a lower end thereof; and

a central cylindrical partition defining an inner periphery of the inner separation region being defined at an inner periphery thereof by a central cylindrical partition, the interior of which said central cylindrical partition is has an open at a lower end thereof to through which provide access is directly provided to the outlet opening of the frustoconical base.

2. (original) A hydrodynamic treatment device as claimed in claim 1, in which the inlet opens into the outer separation region and the outlet opens into the inner separation region.

3. (canceled)

4. (previously presented) A hydrodynamic treatment device as claimed in claim 1, in which the inner separation region communicates with the outer separation region through at least one aperture formed in the inner partition.

5. (original) A hydrodynamic treatment device as claimed in claim 4, in which the or each aperture is disposed adjacent the lower end of the inner partition.

6. (canceled)

7. (previously presented) A hydrodynamic treatment device as claimed in claim 4, in which the aperture comprises a circumferential gap between the inner partition and a wall closing the lower end of the inner separation region.

8. (previously presented) A hydrodynamic treatment device as claimed in claim 4, in which the or each aperture is provided with a screen.

9. (canceled)

10. (original) A hydrodynamic treatment device as claimed in claim 9, in which the lower end wall is frusto-conical and diverges in the downwards direction.

11. (original) A hydrodynamic treatment device as claimed in claim 10, in which the frusto-conical lower end wall projects beyond the inner partition.

12. (previously presented) A hydrodynamic treatment device as claimed in claim 9, in which the lower end wall terminates short of the frusto-conical base of the vessel, thereby defining an annular gap between the frusto-conical base and the lower end wall.

13. (previously presented) A hydrodynamic treatment device as claimed in claim 1, in which a filter media is provided in the inner separation region.

14. (original) A hydrodynamic treatment device as claimed in claim 13, in which the filter media substantially fills the inner separation region.

15. (previously presented) A hydrodynamic treatment device as claimed in claim 13, in which the filter media comprises a replaceable cartridge.

16. (previously presented) A hydrodynamic treatment device as claimed in claim 1, in which an outlet duct extends from the liquid outlet through the cylindrical outer wall of the vessel.

17. (original) A hydrodynamic treatment device as claimed in claim 16, in which an inlet duct extends to the inlet of the vessel through the cylindrical outer wall of the vessel, the inlet duct being aligned with the outlet duct.

18. (original) A hydrodynamic treatment device as claimed in claim 17, in which the inlet is disposed below the inlet duct and comprises an inlet port oriented to discharge inlet flow into the vessel in a tangential direction with respect to the axis of the cylindrical outer wall.

19. (previously presented) A hydrodynamic treatment device as claimed in claim 17, in which the inlet and outlet ducts are disposed at an upper region of the vessel.

20. (previously presented) A hydrodynamic treatment device as claimed in claim 17, in which the inlet duct communicates with the inlet through a chamber, the chamber being provided with bypass means for allowing flow from the chamber to the inner separation region, by passing the outer separation region.

21. (previously presented) A hydrodynamic treatment device as claimed in claim 20, in which the inlet port is provided in the wall of an inlet shute which extends downwardly from the chamber.
22. (original) A hydrodynamic treatment device as claimed in claim 21, in which the bypass means comprises a weir disposed between the chamber and the inner separation region, the overflow edge of the weir being at a level higher than the inlet port.
23. (previously presented) A hydrodynamic separator as claimed in claim 1, in which the inner partition is cylindrical.
24. (previously presented) A hydrodynamic separator as claimed in claim 1, in which the inner partition is coaxial with the outer wall.
25. (cancelled)